

Claims

1. A method of automatic creation of a talk group in a
5 wireless radio communication system (100) comprising a
plurality of mobile stations (102 - 116), said method
comprising the steps of:
- a) transmitting (200) by a first mobile station (102)
an emergency message containing at least its ID and
10 localization data and indication that this is an
emergency message;
 - b) transmitting (202) by other mobile stations their
IDs and localization data in response to said
emergency message;
 - 15 c) creating (206) said talk group by selecting those
mobile stations which transmitted their IDs and
localization data.
2. A method according to claim 1, wherein only those
20 other mobile stations, which are within a predefined
distance from said first mobile station transmits their
IDs and localization data.
3. A method according to claim 2, wherein for
25 communication system operating in trunking mode said
predefined distance is limited to the borders of a cell
within which said first mobile station is located or to
a group of cells.
- 30 4. The method according to claim 2 or 3, wherein said
other mobile stations, which distance from said first
mobile station is larger than said predefined distance,
transmit their localization data if there is no other
mobile station within said second predefined distance.

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5. The method according to claim 4 comprising the step of:

- a) increasing said predefined distance if no one of said other mobile station responded to said emergency message;
- 5 b) re-sending said emergency message.

6. The method according to claim 1 or claim 5, wherein said other mobile stations transmit their IDs and
10 localization data with a predefined delay and said predefined delay increases with increasing distance from said first mobile station.

7. The method according to claim 1 or claim 6, wherein
15 only those of said other mobile stations which are within a predefined distance from said first mobile station are selected to said talk group.

8. The method according to claim 7, wherein some of said
20 other mobile stations, which are located beyond said predefined distance, are selected to said talk group if there is no one of said other mobile stations within said predefined distance or the number of said other mobile stations is below a predefined threshold.

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9. The method according to any one of preceding claims, wherein after receiving said IDs and localization data of said other mobile stations, said step of selecting is performed by said first mobile
30 station.

10. The method according to claim 9, wherein after creation of said talk group information on said talk group is transmitted to a dispatch centre, said

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information includes IDs of members of said talk group and their localization data.

11. The method according to any one of claims 1 - 8,
5 wherein after receiving said IDs and localization data of said other mobile stations, said step of selecting is performed by an infrastructure.

12. The method according to any one of preceding
10 claims, wherein at least one an emergency service unit, located closest to said first mobile station is added to said talk group.

13. The method according to any one of claims 10 - 12,
15 wherein a dispatch centre transmits driving directions to said emergency service unit.

14. The method according to any one of preceding
claims, wherein said localization data are Global
20 Positioning System Data or triangulation based data.

15. The method according to any one of preceding
claims, wherein said emergency message contains also an
indication what type of emergency service is requested.
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16. The method according to any one of preceding
claims, wherein said emergency message is transmitted to
a dispatch centre, and said dispatch centre forwards
said emergency message to said other mobile stations.
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17. The method according to any one of preceding
claims, wherein said dispatch centre is added to said
talk group.

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18. A mobile station comprising means for signal transmission (602, 604, 606), means for signal reception (608, 604, 606), a microphone (620), an audio processing circuitry (624, 626), a keypad (616), a microprocessor (610), a memory (612), a localization circuitry (614),
5 **characterized in that** it further comprises an emergency switch (622) being adapted to initiate transmission of an emergency message, said emergency message comprising localization data, ID of said mobile station and an
10 indication that this is emergency message.

19. The mobile station according to claim 18 being adapted to receive emergency messages from other mobile stations.

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20. The mobile station according to any one of claims 18 or 19 being adapted to send its ID and localization data in response to emergency message received from any one of said other mobile stations.

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21. The mobile station according to any one of claims 18 - 20 being adapted to receive response to emergency message from said other mobile stations.

25 22. The mobile station according to claim 19 or claim 21, wherein said microprocessor being adapted to calculate distance between said mobile station and any one of said other mobile stations.

30 23. The mobile station according to any one of claims 18 to 22, wherein said microprocessor is adapted to store in said memory localization data and IDs received from said other mobile stations.

24. The mobile station according to claim 23, wherein
said microprocessor is adapted to calculate distances
between said first mobile station and any one of said
other mobile stations which have responded to said
5 emergency message and create a talk group comprising
other mobile stations based on said calculated
distances.

25. The mobile station according to any one of claims
10 18 to 24 wherein said localization circuitry is a Global
Positioning System unit.

26. The mobile station according to any one of claims
18 to 24 wherein said microprocessor is adapted to
15 calculate localization of said mobile station based on
triangulation data.